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Although contagious yawning occurs commonly in adulthood, previous studies reported it to be uncommon in children below 4-5 years. However, these studies did not regulate eye contact, a factor that can induce contagious yawning. We therefore investigated whether a cue to make eye contact would infuence contagious yawning, particularly in young children. Fifty-six children between the ages of 3 and 16 watched video clips of models either yawning or opening their mouths. Contagious yawning was observed from the age of 3 years, and was negatively correlated with age. Whereas children older than 8 years caught yawns only after the yawning clips, children under the age of 8 years yawned contagiously following both yawn and control clips. Additionally, frequent imitation

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not attend to faces, and in particular the eyes, as much as older children and adults do. However, similar to previous studies, the frequency of yawn contagion seemed to increase at around 4 years of age [9]. In this regard, our stimuli did not change the age at which yawn contagion becomes more prevalent.

It is unclear why explicitly cuing eye contact makes a di erence in how contagious yawns might be for young children; a er all, infants start to make eye contact within the rst few months postpartum [18]. It may be, as Millen and Anderson [6] suggested, that young children are less susceptible to the various psychological in uences of yawning, and therefore, their gaze needs to be directed to the most important stimuli for yawn contagion. is suggestion is at least plausible and supports the argument put forth by Senju et al. [16] that personal di erences in social orienting may mediate associations between susceptibility to contagious yawning and the capacity for empathy.

It is also possible that poor general attention skills in very young children, which may result in a lack of attention to social cues, is responsible for the reduced yawn contagion that has been previously described in children under the age of 6 years. e nding that children under the age of 8 years yawned a er both yawn and control clips may indicate that young children attend less to speci c facial features of

be bene cial to use narrow and de ned age bands in future research, to determine whether a developmental trajectory for yawn contagion can be identified. e use of longer interim periods between video clips may clear up uncertainty surrounding what factors in uence young children's tendency to yawn following control clips. Future research should also make use of an eye tracker to determine the exact areas of xation of a participant's gaze.

In conclusion, when cued to look at the eyes, contagious yawns occurred in children from the age of 3 years. We also observed frequent imitations of yawns, especially amongst younger children, which have not been noted in previous research. e current ndings suggest that future research control for eye xation when investigating contagious yawning (or the lack thereof) in very young children.

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